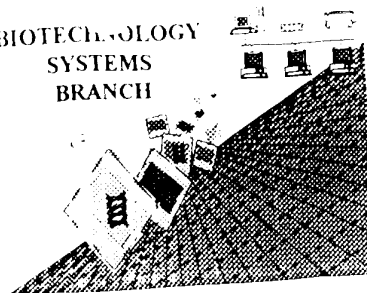


## RAW SEQUENCE LISTING ERROR REPORT

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/820,053

Source: OIPF

Date Processed by STIC: 4/11/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.  
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

### Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST 25. Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

# Raw Sequence Listing Error Summary

SERIAL NUMBER: 09/820,053

## ERROR DETECTED SUGGESTED CORRECTION

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1        Wrapped Nucleics  
The number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
  
- 2        Wrapped Aminos  
The amino acid number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
  
- 3        Incorrect Line Length  
The rules require that a line not exceed 72 characters in length. This includes spaces.
  
- 4        Misaligned Amino Acid Numbering  
The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and use spacing between the numbers.
  
- 5        Non-ASCII  
This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.  
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
  
- 6        Variable Length  
Sequence(s)        contain n's or Xaa's which represented more than one residue.  
As per the rules, each n or Xaa can only represent a single residue.  
Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing.
  
- 7        PatentIn ver. 2.0 "bug"  
A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s)       . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies primarily to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**
  
- 8        Skipped Sequences (OLD RULES)  
Sequence(s)        missing. If intentional, please use the following format for each skipped sequence:  
**(2) INFORMATION FOR SEQ ID NO:X:**  
**(i) SEQUENCE CHARACTERISTICS:**(Do not insert any headings under "SEQUENCE CHARACTERISTICS")  
**(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:**  
**This sequence is intentionally skipped**  
  
Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
  
- 9        Skipped Sequences (NEW RULES)  
Sequence(s)        missing. If intentional, please use the following format for each skipped sequence.  
**<210> sequence id number**  
**<400> sequence id number**  
**000**
  
- 10        Use of n's or Xaa's (NEW RULES)  
Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
  
- 11        Use of "Artificial" (NEW RULES)  
Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules.  
Valid response is Artificial Sequence.
  
- 12        Use of <220>Feature (NEW RULES)  
Sequence(s)        are missing the <220>Feature and associated headings.  
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial Sequence" or "Unknown"  
**Please explain source of genetic material in <220> to <223> section.**  
**(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules)**
  
- 13        PatentIn ver. 2.0 "bug"  
**Please do not use "Copy to Disk" function of PatentIn version 2.0.** This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other means to copy file to floppy disk.

OIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/820,053

DATE: 04/11/2001  
TIME: 15:25:33

Input Set : A:\Helx027.app  
Output Set: N:\CRF3\04112001\I820053.raw

pp 1-5

Does Not Comply  
Corrected Diskette Needed

3 <110> APPLICANT: Owen, Donald R.  
5 <120> TITLE OF INVENTION: SHORT BIOACTIVE PEPTIDES  
7 <130> FILE REFERENCE: HELX027  
9 <140> CURRENT APPLICATION NUMBER: US/09/820,053  
10 <141> CURRENT FILING DATE: 2001-03-28  
12 <160> NUMBER OF SEQ ID NOS: 165  
14 <170> SOFTWARE: PatentIn Ver. 2.1  
16 <210> SEQ ID NO: 1  
17 <211> LENGTH: 23  
18 <212> TYPE: PRT  
19 <213> ORGANISM: SYNTHETIC  
21 <400> SEQUENCE: 1  
22 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
23 1 5 10 15  
25 Lys Ala Leu Lys Lys Ala Leu  
26 20  
29 <210> SEQ ID NO: 2  
30 <211> LENGTH: 23  
31 <212> TYPE: PRT  
32 <213> ORGANISM: SYNTHETIC  
34 <220> FEATURE:  
35 <221> NAME/KEY: MOD\_RES  
36 <222> LOCATION: (23)  
37 <223> OTHER INFORMATION: AMIDATION  
39 <400> SEQUENCE: 2  
40 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
41 1 5 10 15  
43 Lys Ala Leu Lys Lys Ala Leu  
44 20  
47 <210> SEQ ID NO: 3  
48 <211> LENGTH: 38  
49 <212> TYPE: PRT  
50 <213> ORGANISM: SYNTHETIC  
52 <400> SEQUENCE: 3  
53 Met Pro Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Val Gly Arg Asn  
54 1 5 10 15  
56 Ile Arg Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly  
57 20 25 30  
59 Glu Ala Lys Ala Leu Gly  
60 35  
63 <210> SEQ ID NO: 4  
64 <211> LENGTH: 23  
65 <212> TYPE: PRT  
66 <213> ORGANISM: SYNTHETIC  
68 <220> FEATURE:  
69 <221> NAME/KEY: MOD\_RES  
70 <222> LOCATION: (23)

Per 1.823 of Sequence Rules, the only valid <213>  
responses are: Unknown,  
Artificial Sequence, or  
scientific name (Genus/species)  
(one of the three)

(see circled  
portion of item 12  
on run summary  
sheet)

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/820,053

DATE: 04/11/2001  
TIME: 15:25:33

Input Set : A:\Helx027.app  
Output Set: N:\CRF3\04112001\1820053.raw

71 <223> OTHER INFORMATION: AMIDATION  
73 <400> SEQUENCE: 4  
74 Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
75 1 5 10 15  
77 Ala Lys Leu Ala Leu Ala Leu  
78 20  
81 <210> SEQ ID NO: 5  
82 <211> LENGTH: 38  
83 <212> TYPE: PRT  
84 <213> ORGANISM: SYNTHETIC  
86 <220> FEATURE:  
87 <221> NAME/KEY: MOD\_RES  
88 <222> LOCATION: (38)  
89 <223> OTHER INFORMATION: AMIDATION  
91 <400> SEQUENCE: 5  
92 Met Pro Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Val Gly Arg Asn  
93 1 5 10 15  
95 Ile Arg Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly  
96 20 25 30  
98 Glu Ala Lys Ala Leu Gly  
99 35  
102 <210> SEQ ID NO: 6  
103 <211> LENGTH: 23  
104 <212> TYPE: PRT  
105 <213> ORGANISM: SYNTHETIC  
107 <400> SEQUENCE: 6  
108 Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
109 1 5 10 15  
111 Ala Lys Leu Ala Leu Ala Leu  
112 20  
115 <210> SEQ ID NO: 7  
116 <211> LENGTH: 23  
117 <212> TYPE: PRT  
118 <213> ORGANISM: SYNTHETIC  
120 <220> FEATURE:  
121 <221> NAME/KEY: MOD\_RES  
122 <222> LOCATION: (23)  
123 <223> OTHER INFORMATION: AMIDATION  
125 <400> SEQUENCE: 7  
126 Gly Ile Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys Ala Phe  
127 1 5 10 15  
129 Val Gly Gly Ile Met Asn Ser  
130 20  
133 <210> SEQ ID NO: 8  
134 <211> LENGTH: 23  
135 <212> TYPE: PRT  
136 <213> ORGANISM: SYNTHETIC  
138 <220> FEATURE:  
139 <221> NAME/KEY: MOD\_RES

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/820,053

DATE: 04/11/2001  
TIME: 15:25:33

Input Set : A:\Helx027.app  
Output Set: N:\CRF3\04112001\I820053.raw

140 <222> LOCATION: (23)  
141 <223> OTHER INFORMATION: AMIDATION  
143 <400> SEQUENCE: 8  
144 Phe Ala Leu Ala Ala Lys Ala Leu Lys Lys Leu Ala Lys Lys Leu Lys 15  
145 1 5 10  
147 Lys Leu Ala Lys Lys Ala Leu 20  
148 20  
151 <210> SEQ ID NO: 9  
152 <211> LENGTH: 23  
153 <212> TYPE: PRT  
154 <213> ORGANISM: SYNTHETIC  
156 <220> FEATURE:  
157 <221> NAME/KEY: MOD\_RES  
158 <222> LOCATION: (23)  
159 <223> OTHER INFORMATION: AMIDATION  
161 <400> SEQUENCE: 9  
162 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Leu Lys Lys Leu Lys 15  
163 1 5 10  
165 Lys Leu Ala Lys Lys Ala Leu 20  
166 20  
169 <210> SEQ ID NO: 10  
170 <211> LENGTH: 23  
171 <212> TYPE: PRT  
172 <213> ORGANISM: SYNTHETIC  
174 <220> FEATURE:  
175 <221> NAME/KEY: MOD\_RES  
176 <222> LOCATION: (23)  
177 <223> OTHER INFORMATION: AMIDATION  
179 <400> SEQUENCE: 10  
180 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Ala Lys Lys Leu Lys 15  
181 1 5 10  
183 Lys Leu Ala Lys Lys Ala Leu 20  
184 20  
187 <210> SEQ ID NO: 11  
188 <211> LENGTH: 21  
189 <212> TYPE: PRT  
190 <213> ORGANISM: SYNTHETIC  
192 <220> FEATURE:  
193 <221> NAME/KEY: MOD\_RES  
194 <222> LOCATION: (21)  
195 <223> OTHER INFORMATION: AMIDATION  
197 <400> SEQUENCE: 11  
198 Phe Ala Leu Ala Lys Leu Ala Lys Lys Ala Lys Ala Lys Leu Lys Lys 15  
199 1 5 10  
201 Ala Leu Lys Ala Leu 20  
202 20  
205 <210> SEQ ID NO: 12  
206 <211> LENGTH: 19  
207 <212> TYPE: PRT

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/820,053

DATE: 04/11/2001  
TIME: 15:25:33

Input Set : A:\Helx027.app  
Output Set : N:\CRF3\04112001\I820053.raw

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208 <213> ORGANISM: SYNTHETIC
210 <220> FEATURE:
211 <221> NAME/KEY: MOD_RES
212 <222> LOCATION: (19)
213 <223> OTHER INFORMATION: AMIDATION
215 <400> SEQUENCE: 12
216 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu Lys
      1           5           10           15
217
219 Lys Ala Leu
223 <210> SEQ ID NO: 13
224 <211> LENGTH: 19
225 <212> TYPE: PRT
226 <213> ORGANISM: SYNTHETIC
228 <400> SEQUENCE: 13
229 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu Lys
      1           5           10           15
230
232 Lys Ala Leu
236 <210> SEQ ID NO: 14
237 <211> LENGTH: 19
238 <212> TYPE: PRT
239 <213> ORGANISM: SYNTHETIC
241 <400> SEQUENCE: 14
242 Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Leu Ala
      1           5           10           15
243
245 Leu Ala Leu
249 <210> SEQ ID NO: 15
250 <211> LENGTH: 23
251 <212> TYPE: PRT
252 <213> ORGANISM: SYNTHETIC
254 <220> FEATURE:
255 <221> NAME/KEY: MOD_RES
256 <222> LOCATION: (23)
257 <223> OTHER INFORMATION: AMIDATION
259 <400> SEQUENCE: 15
260 Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys
      1           5           10           15
261
263 Lys Ala Leu Lys Lys Ala Leu
      20
264
267 <210> SEQ ID NO: 16
268 <211> LENGTH: 16
269 <212> TYPE: PRT
270 <213> ORGANISM: SYNTHETIC
272 <220> FEATURE:
273 <221> NAME/KEY: MOD_RES
274 <222> LOCATION: (16)
275 <223> OTHER INFORMATION: AMIDATION
277 <400> SEQUENCE: 16
278 Phe Ala Leu Ala Leu Lys Lys Ala Leu Lys Lys Ala Leu Lys
      1           5           10           15
279

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/820,053

DATE: 04/11/2001  
TIME: 15:25:33

Input Set : A:\Helx027.app  
Output Set: N:\CRF3\04112001\I820053.raw

282 <210> SEQ ID NO: 17  
283 <211> LENGTH: 17  
284 <212> TYPE: PRT  
285 <213> ORGANISM: SYNTHETIC  
287 <220> FEATURE:  
288 <221> NAME/KEY: MOD\_RES  
289 <222> LOCATION: (17)  
290 <223> OTHER INFORMATION: AMIDATION  
292 <400> SEQUENCE: 17  
293 Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Leu Ala 15  
294 1 5 10  
296 Leu  
300 <210> SEQ ID NO: 18  
301 <211> LENGTH: 19  
302 <212> TYPE: PRT  
303 <213> ORGANISM: SYNTHETIC  
305 <220> FEATURE:  
306 <221> NAME/KEY: MOD\_RES  
307 <222> LOCATION: (19)  
308 <223> OTHER INFORMATION: AMIDATION  
310 <400> SEQUENCE: 18  
311 Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Leu Ala 15  
312 1 5 10  
314 Leu Ala Leu  
318 <210> SEQ ID NO: 19  
319 <211> LENGTH: 23  
320 <212> TYPE: PRT  
321 <213> ORGANISM: SYNTHETIC  
323 <220> FEATURE:  
324 <221> NAME/KEY: MOD\_RES  
325 <222> LOCATION: (13)..(14)  
326 <223> OTHER INFORMATION: Xaa = D-lysine  
328 <400> SEQUENCE: 19  
329 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Xaa Xaa Leu Lys 15  
330 1 5 10  
332 Lys Ala Leu Lys Lys Ala Leu  
333 20  
336 <210> SEQ ID NO: 20  
337 <211> LENGTH: 15  
338 <212> TYPE: PRT  
339 <213> ORGANISM: SYNTHETIC  
341 <220> FEATURE:  
342 <221> NAME/KEY: MOD\_RES  
343 <222> LOCATION: (15)  
344 <223> OTHER INFORMATION: AMIDATION  
346 <400> SEQUENCE: 20  
347 Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Leu Ala Leu 15  
348 1 5 10  
351 <210> SEQ ID NO: 21

*Please correct this error in  
subsequent sequence.*

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/820,053

DATE: 04/11/2001

TIME: 15:25:34

Input Set : A:\Helx027.app

Output Set: N:\CRF3\04112001\I820053.raw

L:9 M:270 C: Current Application Number differs, Replaced Application Number  
 L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
 L:329 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19

4/11/01